UNITED STATES PATENT AND TRADEMARK OFFICE

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10/788,646	02/27/2004	Derek Leigh Lownsbrough	6533/53809	7281

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ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	10/788,646	LOWNSBROUGH ET AL.
	Examiner	Art Unit	
	Backhean Tiv	2151	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>27 February 2004</u>.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-30</u> is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-30</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>2/27/04</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All b)☐ Some * c)☐ None of:

　　　　1.☐ Certified copies of the priority documents have been received.

　　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
　　Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

Detailed Action

Claims 1-30 are pending in this application.

Drawings

The Drawings filed on 12/27/04 are acceptable.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-6,20-22,26 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 2,5-10,18-20 of copending Application No. 10/938,968. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 2,5-10,18-20 of copending application 10/938,968 teaches all the limitations of claims 1-6,20-22,26 of the present application.

This is a <u>provisional</u> obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 27 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 27, recites "classification module is further operative to", after "to" there is no limitation. It is unclear what the applicant is trying to claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Publication 2005/0154785 issued to Reed et al(Reed) in view of US Publication 2003/0220925 issued to Lior.

As per claim 1, Reed teaches a method facilitating of web services network(Abstract), comprising: parsing a web services interface definition document defining the attributes of a web service(Fig.3B; parsing WSDL); defining at least one class corresponding to the web service(Fig.3B, para.0083; getting list of packages used by web service); and configuring mechanism to identify the at least one class based on at least one attribute obtained from the web services definition document(Fig.3B, para.0096; generating class files corresponding to the WSDL).

Reed however does not explicitly traffic class.

Lior teaches traffic class(para.0059; determines the type of transport protocol).

Therefore it would have been obvious to one ordinary skill in the art at the time of the invention to modify the teachings of Reed to use traffic class as taught by Lior in order to specify the protocol and data format for a port type.

One ordinary skill in the art would have been motivated to combine the teachings of Reed and Lior in order to specify the protocol and data format for a port type.

As per claim 2, the method of claim 1 wherein the defining step comprises defining a first traffic class corresponding to the web service(Reed, para.0036; WSDL is first class); defining at least a second traffic class corresponding to an attribute of the web service(Reed, para.0083); and associating the at least a second traffic class as a child traffic class of the first traffic class in a hierarchical traffic classification scheme(Reed, para.0083; generating class file from the WSDL).

As per claim 3, the method of claim 2 wherein the attribute in the second defining step is an operation of the web service(Reed, Fig.4).

As per claim 4, the method of claim 2 wherein the attribute in the second defining step is a binding supported by the web service(Lori, para.0059). Motivation to combine set forth in claim 1.

As per claim 5, the method of claim 1 wherein the web services interface definition document is a WSDL document(Reed, Fig.3B).

Claims 6-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Publication 2005/0154785 issued to Reed et al(Reed) in view of US Publication 2003/0220925 issued to Lior in further view of US Patent 7,302,480 issued to Lahtinen.

As per claim 6, Reed teaches a method facilitating the classification of web services network(Abstract), comprising: maintaining a data structure comprising, for each web service detected in the data flows, a web service identifier corresponding to the web service(Fig.3B, para.0083); and configuring a mechanism to identify at least one web service in the data structure based at least on the web service identifier corresponding to the web service(Fig.3B, para.0096).

Reed however does not explicitly teach network traffic classification and monitoring a data communications path for data flows associated with web services network traffic.

Lior teaches network traffic classification(para.0059)

Therefore it would have been obvious to one ordinary skill in the art at the time of the invention to modify the teachings of Reed to classify network traffic as taught by Lior in order to specify the protocol and data format for a port type.

One ordinary skill in the art would have been motivated to combine the teachings

of Reed and Lior in order to specify the protocol and data format for a port type.

Lahtinen teaches monitoring a data communications path for data flows

associated with web services network traffic(Abstract, col.3, lines 15-55).

Therefore it would have been obvious to one ordinary skill in the art at the time of

the invention to modify the teachings of Reed in view of Lior to monitor traffic as taught

by Lahtinen in order to monitor traffic flow between a client and server(Lahtinen,

Abstract).

One ordinary skill in the art would have been motivated to combine the teachings

of Reed, Lior, and Lahtinen in order to monitor traffic flow between a client and

server(Lahtinen, Abstract)..

As per claim 7, the method of claim 6 wherein the configuring step comprises

creating a traffic class identifier corresponding to the web service; creating at least one

matching rule defining an attribute of the web service; associating the at least one

matching rule to the traffic crass identifier in the traffic classification mechanism(Lori,

para.0040,0053). Motivation to combine set forth in claim 6.

As per claim 8, the method of claim 7 wherein the attribute in the second creating

step is the web service identifier corresponding to the web service(Lori,

para.0040,0053). Motivation to combine set forth in claim 6.

As per claim 9, the method of claim 8 further comprising

creating at least one additional matching rule defining an attribute of the web

service(Lori, para.0040,0053). Motivation to combine set forth in claim 6.

As per claim 10, the method of claim 9 wherein the attribute in the third creating step is a protocol associated with the web service(Lori, para.0059). Motivation to combine set forth in claim 6.

As per claim 11, the method of claim 10 wherein the protocol is a web services protocol(Lori, para.0059). Motivation to combine set forth in claim 6.

As per claim 12, the method of claim 10 wherein the protocol is the SOAP protocol(Lori, para.0002). Motivation to combine set forth in claim 6.

As per claim 13, the method of claim 10 wherein the protocol is the HTTP protocol(Lori, para.0059). Motivation to combine set forth in claim 6.

As per claim 14, the method of claim 6 further comprising maintaining a count of the number of data flows corresponding to each web service traversing the communications path(Lahtinen, Abstract, col.3, lines 15-50). Therefore it would have been obvious to one ordinary skill in the art at the time of the invention to modify the teachings of Reed in view of Lori in further view of Lahtinen of monitoring the traffic between client and server to include counting a number of requests in order track how many request are being made to the server.

As per claim 15, the method of claim 6 wherein the web service identifier comprises a host name(Lori, para.0039-0049). Motivation to combine set forth in claim 6.

As per claim 16, the method of claim 6 wherein the web service identifier comprises a host name and a uniform resource indicator(Lori, para.0039-0049). Motivation to combine set forth in claim 6.

As per claim 17, the method of claim 6 wherein the configuring step is performed in response to a command from an end user(Lori, para.0039-0049). Motivation to combine set forth in claim 6.

As per claim 18, the method of claim 6 wherein the monitoring step comprises upon detection of a new data flow, parsing at least one packet in the data flow to identify the protocol attributes corresponding to the data flow; matching the identified protocol attributes to a predetermined set of web services protocol attributes to determine whether the data flow is web services web services data flow(Reed, Fig.3B, Lori, para.0059, Lahtinen, col.3, lines 15-67). Motivation to combine set forth in claim 6.

As per claim 19, the method of claim 18 wherein the parsing step comprises parsing the at least one packet in the data flow into a flow specification, wherein the flow specification contains at least one instance of any one of the following: a protocol family designation, a direction of packet flow designation, a protocol type designation, a binding type, a pair of hosts, a pair of ports, a pointer to a MIME type, a pointer to an application-specific attribute(Reed, para.0082-0083, Lori, para.0059).Motivation to combine set forth in claim 6.

As per claim 20, Reed teaches a method facilitating the classification of web services network(Abstract), comprising; maintaining a data structure comprising, for each web service detected in the data flows, a web service identifier corresponding to the web service(Fig.3B, para.0083); and receiving an interface definition document defining the attributes of a web service maintained in the data structure(Fig.3B); processing the interface definition document to identify at least one class

corresponding to the web service(Fig.3B, para.0083); and configuring a mechanism to identify the at least one class based on at least one attribute obtained from the web services definition document(Fig.3B, para.0096).

Reed however does not explicitly teach network traffic classification; traffic class and monitoring a data communications path for data flows associated with web services network traffic.

Lior teaches network traffic classification and traffic class (para.0059)

Therefore it would have been obvious to one ordinary skill in the art at the time of the invention to modify the teachings of Reed to classify network traffic as taught by Lior in order to specify the protocol and data format for a port type.

One ordinary skill in the art would have been motivated to combine the teachings of Reed and Lior in order to specify the protocol and data format for a port type.

Lahtinen teaches monitoring a data communications path for data flows associated with web services network traffic(col.3, lines 15-67).

Therefore it would have been obvious to one ordinary skill in the art at the time of the invention to modify the teachings of Reed in view of Lior to monitor traffic as taught by Lahtinen in order to monitor traffic flow between a client and server(Lahtinen, Abstract).

One ordinary skill in the art would have been motivated to combine the teachings of Reed, Lior, and Lahtinen in order to monitor traffic flow between a client and server(Lahtinen, Abstract, col.3, lines 15-67).

As per claim 21, the method of claim 20 further comprising

subsequent to the configuring step, processing the latest interface definition document

corresponding to the web service to determine whether changes to the configuration of

the network traffic classification mechanism are required(Reed, para.0082-0083, Lori,

para.058-0061). Motivation to combine set forth in claim 20.

As per claim 22, Reed teaches an apparatus facilitating the classification of web

services network(Abstract), comprising maintain a data structure comprising, for each

web service detected in the data flows, a web service identifier corresponding to the

web service(Fig.3B, para.0083); and create a class in the database for a selected web

service in the data structure, wherein at least one matching rule associated with the

class includes the web service identifier associated with the web service(Fig.3B,

para.0096).

Reed however does not explicitly teach a traffic classification database operative

to match data flows against a plurality of traffic classes, wherein each traffic class in the

plurality of traffic classes is defined by at least one matching attribute; a packet

processor operative to detect data flows in network traffic traversing a network; a web

services module operative to identify web services in the data flows traversing the

network.

Lior teaches traffic class; a traffic classification database operative to match data

flows against a plurality of traffic classes, wherein each traffic class in the plurality of

traffic classes is defined by at least one matching attribute (para.0059)

Therefore it would have been obvious to one ordinary skill in the art at the time of the invention to modify the teachings of Reed to traffic class; a traffic classification database operative to match data flows against a plurality of traffic classes, wherein each traffic class in the plurality of traffic classes is defined by at least one matching attribute as taught by Lior in order to specify the protocol and data format for a port type.

One ordinary skill in the art would have been motivated to combine the teachings of Reed and Lior in order to specify the protocol and data format for a port type.

Lahtinen teaches a packet processor operative to detect data flows in network traffic traversing a network; a web services module operative to identify web services in the data flows traversing the network(col.3, lines 15-67).

Therefore it would have been obvious to one ordinary skill in the art at the time of the invention to modify the teachings of Reed in view of Lior to a packet processor operative to detect data flows in network traffic traversing a network; a web services module operative to identify web services in the data flows traversing the network as taught by Lahtinen in order to monitor traffic flow between a client and server(Lahtinen, Abstract, col.3, lines 15-67).

One ordinary skill in the art would have been motivated to combine the teachings of Reed, Lior, and Lahtinen in order to monitor traffic flow between a client and server(Lahtinen, Abstract, col.3, lines 15-67).

As per claim 23, the apparatus of claim 22 wherein the web services classification module is further operative to receive an interface definition document defining the attributes of the selected web service(Reed, para.0048,0082-0083);

process the interface definition document to identify at least one traffic class

corresponding to the selected web service(Reed, para.0048,0082-0083, Lori,

para.0059); and create the at least one traffic class in the traffic classification database,

wherein at least one matching rule associated with the corresponding traffic class is

based on one or more attributes in the interface definition document(Lior, para.0059).

Motivation to combine set forth in claim 22.

As per claim 24, the apparatus of claim 23 wherein the at least one traffic class is

identified relative to the operations identified in the interface definition document(Reed,

para.0048). Motivation to combine set forth in claim 22.

As per claim 25, the apparatus of claim 23 wherein the at least one traffic class is

identified relative to the bindings identified in the interface definition document(Lori,

0059). Motivation to combine set forth in claim 22.

As per claim 26, Reed teaches an apparatus facilitating the classification of web

services network(Abstract) , comprising a web services classification module operative

to receive an interface definition document defining the attributes of the selected web

service(Fig.3B; para.0083); process the interface definition document to identify at least

one class corresponding to the selected web service(Fig.3B; para.0083); and create the

at least one class in the database, wherein at least one matching rule associated with

the corresponding class is based on one or more attributes in the interface definition

document(para.0082-0083,0096).

Reed however does not explicitly teach a traffic classification database operative

to match data flows against a plurality of traffic classes, wherein each traffic class in the

plurality of traffic classes is defined by at least one matching attribute; a packet processor operative to detect data flows in network traffic traversing a network; a web services module operative to identify web services in the data flows traversing the network.

Lior teaches traffic class; a traffic classification database operative to match data flows against a plurality of traffic classes, wherein each traffic class in the plurality of traffic classes is defined by at least one matching attribute (para.0059)

Therefore it would have been obvious to one ordinary skill in the art at the time of the invention to modify the teachings of Reed to traffic class; a traffic classification database operative to match data flows against a plurality of traffic classes, wherein each traffic class in the plurality of traffic classes is defined by at least one matching attribute as taught by Lior in order to specify the protocol and data format for a port type.

One ordinary skill in the art would have been motivated to combine the teachings of Reed and Lior in order to specify the protocol and data format for a port type.

Lahtinen teaches a packet processor operative to detect data flows in network traffic traversing a network; a web services module operative to identify web services in the data flows traversing the network(Abstract).

Therefore it would have been obvious to one ordinary skill in the art at the time of the invention to modify the teachings of Reed in view of Lior to a packet processor operative to detect data flows in network traffic traversing a network; a web services module operative to identify web services in the data flows traversing the network as

taught by Lahtinen in order to monitor traffic flow between a client and server(Lahtinen, Abstract, col.3, lines 15-67).

One ordinary skill in the art would have been motivated to combine the teachings of Reed, Lior, and Lahtinen in order to monitor traffic flow between a client and server(Lahtinen, Abstract, col.3, lines 15-67).

As per claim 27, the apparatus of claim 26 wherein the web services classification module is further operative to(Reed, para.0048). Motivation to combine set forth in claim 26.

As per claim 28, the apparatus of claim 27 wherein the at least one traffic class is identified relative to the operations identified in the interface definition document(Reed, para.0048). Motivation to combine set forth in claim 26.

As per claim 29, the apparatus of claim 27 wherein the at least one traffic class is identified relative to the bindings identified in the interface definition document(Lori, 0059). Motivation to combine set forth in claim 22.

As per claim 30, the apparatus of claim 26 wherein the web services classification module is further operative to identify web services in the data flows traversing the network(Lahtinen, col.3, lines 15-67); maintain a data structure comprising, for each web service detected in the data flows, a web service identifier corresponding to the web service Lahtinen, col.3, lines 15-67); and optionally create a traffic class in the traffic classification database for a selected web service in the data structure, wherein at least one matching rule associated with the traffic class includes

the web service identifier associated with the web service(Reed, para.0082-0083).

Motivation set forth in claim 22.

Conclusion

Examiner's Note: Examiner has cited particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in its entirety as potentially teaching of all or part of the claimed invention.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Backhean Tiv whose telephone number is (571) 272-5654. The examiner can normally be reached on M-F 6:30-3:00.
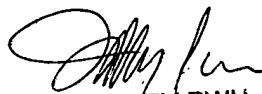
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on (571) 272-3964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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SUPERVISORY PATENT EXAMINER